

Application/ Control No.: 10/624,002
Examiner: GOLOBOY, James C

IN THE CLAIMS

Please amend the claims of the present application under the provisions of 37 C.F.R. §1.121(c), as indicated below:

1. (Currently amended): A ~~nitrate~~ nitrite free grease composition for avoiding an abnormal peeling of a rolling surface of a bearing, said ~~nitrate~~ nitrite free grease composition comprising:

a base oil,
a thickener, and
an additive,

wherein the base oil contains 20% by weight or more of alkyldiphenyl ether oil and does not contain ester oil in the base oil, and has a kinetic viscosity of 20 to 150 mm²/s at 40 degree° C, and wherein the thickener is an aromatic diurea compound represented by the following formula (2)

where ~~R2 and R4~~ R₂ and R₄ are the same or different, and represent each an aromatic hydrocarbon group having 6 to 15 carbon atoms, and ~~R3~~ R₃ represents an aromatic hydrocarbon group having 6 to 15 carbon atoms, and is contained in an amount of 5 to 30% by weight based on the total amount of the base oil and the thickener, and

wherein the additive contains as an essential component 0.5 to 5 parts by weight of a sodium sebacate based on 100 parts by weight of the base oil and the thickener,

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wherein the additive contains a rust preventative which is a partially esterified multivalent alcohol or an organic sulfonic acid salt of an alkali metal or an alkali earth metal.

2. (Canceled)

3. (Previously presented): The grease composition as claimed in claim 1, wherein the base oil contains synthesized hydrocarbon oil.

4-6 (Canceled)

7. (Currently amended): The grease composition as claimed in claim 1, wherein each of the R_1 and R_4 is $C_6H_4(CH_3)$, and the R_3 is $-C_6H_4CH_2C_6H_4-$

represented by the following formula

8-10 (Canceled)

11. (Previously presented): The grease composition as claimed in claim 1, wherein the additive comprises 0.05 to 5 parts by weight of an antioxidant in addition to sodium sebacate based on 100 parts by weight of the base oil and the thickener.

12. (Previously presented): The grease composition as claimed in claim 11, wherein the antioxidant is selected from the group consisting of a sulfur-containing antioxidant, a phenol-based antioxidant and an amine-based antioxidant.

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13. (Currently amended): A grease composition sealed bearing, in which a sliding part of the bearing is sealed with the grease composition as claimed in claim 1.

14. (Currently amended): A ~~nitrate~~ nitrite free grease composition for avoiding an abnormal peeling of a rolling surface of a bearing, said ~~nitrate~~ nitrite free grease composition consisting essentially of:

- a base oil,
- a thickener, and
- an Additive,

wherein the base oil consists of alkyldiphenyl ether oil, and has a kinetic viscosity of 20 to 150 mm²/s at 40°C, and wherein the thickener is an aromatic diurea compound represented by the following formula (2)

where ~~R2 and R4~~ R₂ and R₄ are the same or different, and represent each an aromatic hydrocarbon group having 6 to 15 carbon atoms, and ~~R3~~ R₃ represents an aromatic hydrocarbon group having 6 to 15 carbon atoms and is contained in an amount of 5% to 30% by weight based on the total amount of the base oil and the thickener,

wherein the additive contains as an essential component 0.5 to 5 parts by weight of a sodium sebacate based on 100 parts by weight of the base oil and the thickener,

wherein the additive contains 0.05 to 5 parts by weight of an antioxidant based on 100 parts by weight of the base oil and the thickener,

wherein the antioxidant is at least one member selected from the group consisting of a sulfur-containing antioxidant, a phenol-based antioxidant and an amine-based antioxidant,

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wherein the additive contains a rust preventative which is a partially esterified multivalent alcohol or an organic sulfonic acid salt of an alkali metal or an alkali earth metal.

15. (Currently amended): A ~~nitrate~~ nitrite free grease composition for avoiding an abnormal peeling of a rolling surface of a bearing, said ~~nitrate~~ nitrite free grease composition consisting essentially of:

a base oil,
a thickener, and
an Additive additive,

wherein the base oil consists of 80% by weight of alkyldiphenyl ether oil and 20% by weight of synthesized hydrocarbon oil, and has a kinetic viscosity of 20 to 150 ~~mm²/s~~ mm²/s at 40°C,

wherein the thickener is an aromatic diurea compound represented by the following formula (2)

where ~~R2 and R4~~ R₂ and R₄ are the same or different, and represent each an aromatic hydrocarbon group having 6 to 15 carbon atoms, and ~~R3~~ R₃ represents an aromatic hydrocarbon group having 6 to 15 carbon atoms and is contained in an amount of 5% to 30% by weight based on the total amount of the base oil and the thickener,

wherein the additive contains as an essential component 0.5 to 5 parts by weight of a sodium sebacate based on 100 parts by weight of the base oil and the thickener,

wherein the additive contains 0.05 to 5 parts by weight of an antioxidant based on 100 parts by weight of the base oil and the thickener.

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wherein the antioxidant is at least one member selected from the group consisting of a sulfur-containing antioxidant, a phenol-based antioxidant and an amine-based antioxidant,

wherein the additive contains a rust preventative which is a partially esterified multivalent alcohol or an organic sulfonic acid salt of an alkali metal or an alkali earth metal.

16. (new): A nitrite free grease composition for avoiding an abnormal peeling of a rolling surface of a bearing, said nitrite free grease composition consisting essentially of:

a base oil,

a thickener, and

an additive, contains alkyldiphenyl ether oil and has a kinetic viscosity of 20 to 150 mm²/s at 40°C, and

wherein the thickener is an aromatic diurea compound represented by the following formula (2)

where R₂ and R₄ are the same or different, and represent each an aromatic hydrocarbon group having 6 to 15 carbon atoms,

wherein the additive contains as an essential component 0.5 to 5 parts by weight of a sodium sebacate based on 100 parts by weight of the base oil and the thickener,

wherein the additive contains 0.05 to 5 parts by weight of an antioxidant based on 100 parts by weight of the base oil and the thickener,

wherein the antioxidant is at least one member selected from the group consisting of a sulfur-containing antioxidant, a phenol-based antioxidant and an amine-based antioxidant,

wherein the additive contains a rust preventative which is a partially esterified multivalent alcohol or an organic sulfonic acid salt of an alkali metal or an alkali earth metal

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wherein a worked penetration of said grease composition is within a range from 264 to 300.